J. Jpn. Bot. **84:** 338–341 (2009)

A New Species of *Embelia* (*Myrsinaceae*) from Arunachal Pradesh, India

Ritesh K. CHOUDHARY[a], Ramesh C. SRIVASTAVA[a] and Arup K. DAS[b]

[a] Botanical Survey of India, Itanagar, Arunachal Pradesh, 791 111 INDIA;
E-mail: ritesh_botany2002@yahoo.co.in
[b]Rajiv Gandhi University, Itanagar, Arunachal Pradesh, 791 112 INDIA

(Received on February 3, 2009)

Embelia arunachalensis R. K. Choudhary, R. C. Srivastava & A. K. Das, sp. nov. (*Myrsinaceae*) is described from Upper Siang District of Arunachal Pradesh, India.

Key words: Arunachal Pradesh, *Embelia arunachalensis*, India, *Myrsinaceae*, new species, Upper Siang.

During a field survey of the Upper Siang District of Arunachal Pradesh, some specimens under the genus *Embelia* Burm. f. were collected from Gelling. A critical study of these specimens, plant population in field and perusal of the literature (Chen and Pipoly 1996), revealed that they represent a new species of *Embelia.* A detailed description along with photoplate is provided in this paper for easy identification of the taxon in the field. The genus *Embelia* is represented by ca. 140 species distributed mostly in Africa, SE Asia and Pacific Islands; 16 species occur in India out of which six are in Arunachal Pradesh (Giri et al. 2008).

Embelia arunachalensis R. K. Choudhary, R. C. Srivastava & A. K. Das, sp. nov.
[Figs. 1, 3B, 4B]

Affinis *Emberliae parviflorae* sed differt in foliis apice mucronatis, prope apicem dense punctatis et mesocarpio crasso.

Typus: INDIA; Arunachal Pradesh, Upper Siang District, Gelling, ca. 700 m, 18 September 2007, R. K. Choudhary 18702A (ARUN*–holo); R. K. Choudhary 18702B (ARUN–iso).

*The abbreviation ARUN means the Herbarium, Botanical Survey of India, Itanagar, Arunachal Pradesh.

Scandent shrubs, villous-tomentose on branchlets, petioles, pedicels and inflorescences. Branchlets terete, lenticellate, glandular. Leaflets always ovate to oblong, 1.1–1.9 × 0.7–1.1 cm, glabrous, densely punctate, mucronate at apex, villous or scaly beneath; lateral veins inconspicuous; petioles 0.5–1 mm long. Inflorescences axillary, staminate, pistillate and hermaphrodite; staminate inflorescences usually cymose, 8–12 mm long, 2–5-flowered; pistillate ones usually subumbellate, 4–7mm long, 3–5-flowered; bisexual ones fascicled, 3–5 mm long, 3–8-flowered, pendulous; bracts lanceolate to subulate, 0.5–1 mm long, red punctate, densely villous. Flowers white or greenish-white, 5-merous, membranous; staminate flowers 2.5–3 mm long, pistillate 1.8–2.3 mm long, bisexual flowers 2–2.5 mm long; pedicels 3–8 mm long in staminate, 2–5mm long in pistillate, 0.5–1.5 mm long in bisexual flowers. Sepals ovate-

Table 1. Comparison in leaflet and fruit between *Embelia parviflora* Wall. ex A. DC. and *E. arunachalensis* R. K. Choudhary, R. C. Srivastava & A. K. Das

	E. parviflora	*E. arunachalensis*
Leaflet	ovate or broadly ovate, 1–1.5(–2.5) × 0.6–1 (–1.3) cm, villous or scaly beneath; base broadly rounded, truncate or cordate; apex acute, obtuse or rounded, sparsely red punctate near apex; midrib adaxially impressed	ovate to oblong, 1.1–1.9 × 0.7–1.1 cm, slightly punctate beneath, always base truncate to cordate, apex mucronate and densely punctate, midrib adaxially depressed
Fruit	globose, 3–5 mm in diam., mesocarp thin	subglobose, 6–8 mm in diam., mesocarp thick

oblong, densely red-punctate, glabrous, sparsely villous at base, margin entire, glandular ciliate. Petals free, ovate, lanceolate or oblong, ca. 1 mm long, glabrous outside, densely granulose inside, obtuse or emarginated at apices. Stamens ca. 0.7 mm long; anthers broadly ovate in staminate, lanceolate in pistillate, and ovate in bisexual flowers, cordate at base, acute or slightly emarginated at apex, connective densely punctate. Styles sparsely glandular; stigma capitate, 4-lobed. Fruits dull to deep red, subglobose, 6–8 mm in diam.; mesocarp thick.

Other specimens examined: INDIA; Arunachal Pradesh, G. D. Pal 78490 (ARUN); Mouling National Park, B. Tam 15553 (ARUN).

Flowering & Fruiting: September to November.

Distribution: India; Arunachal Pradesh.

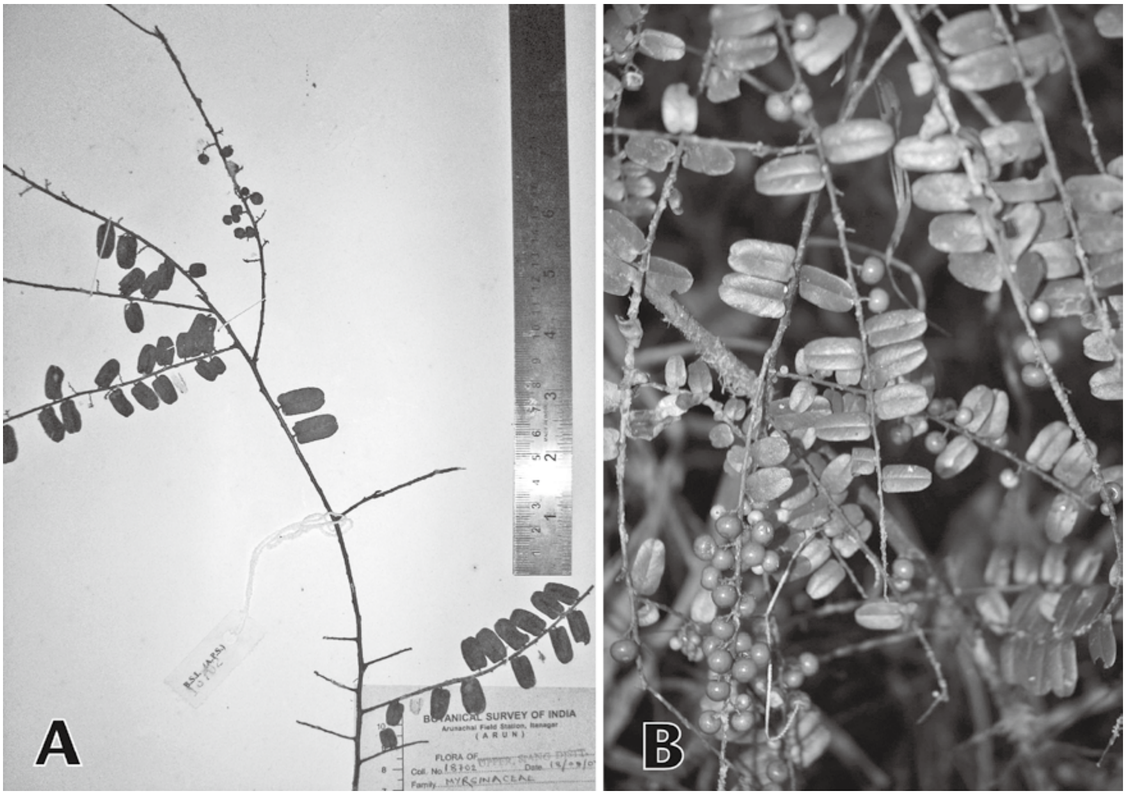
A
B
BOTANICAL SURVEY OF INDIA
Arunachal Field Station, Itanagar
(ARUN)
FLORA OF UPPER SIANG DISTT.
Coll. No. 18302
Date 19/09/0
Family MYRSINACEAE

Fig. 1. Type (A) and habit (B) of *Embelia arunachalensis* R. K. Choudhary, R. C. Srivastava & A. K. Das.

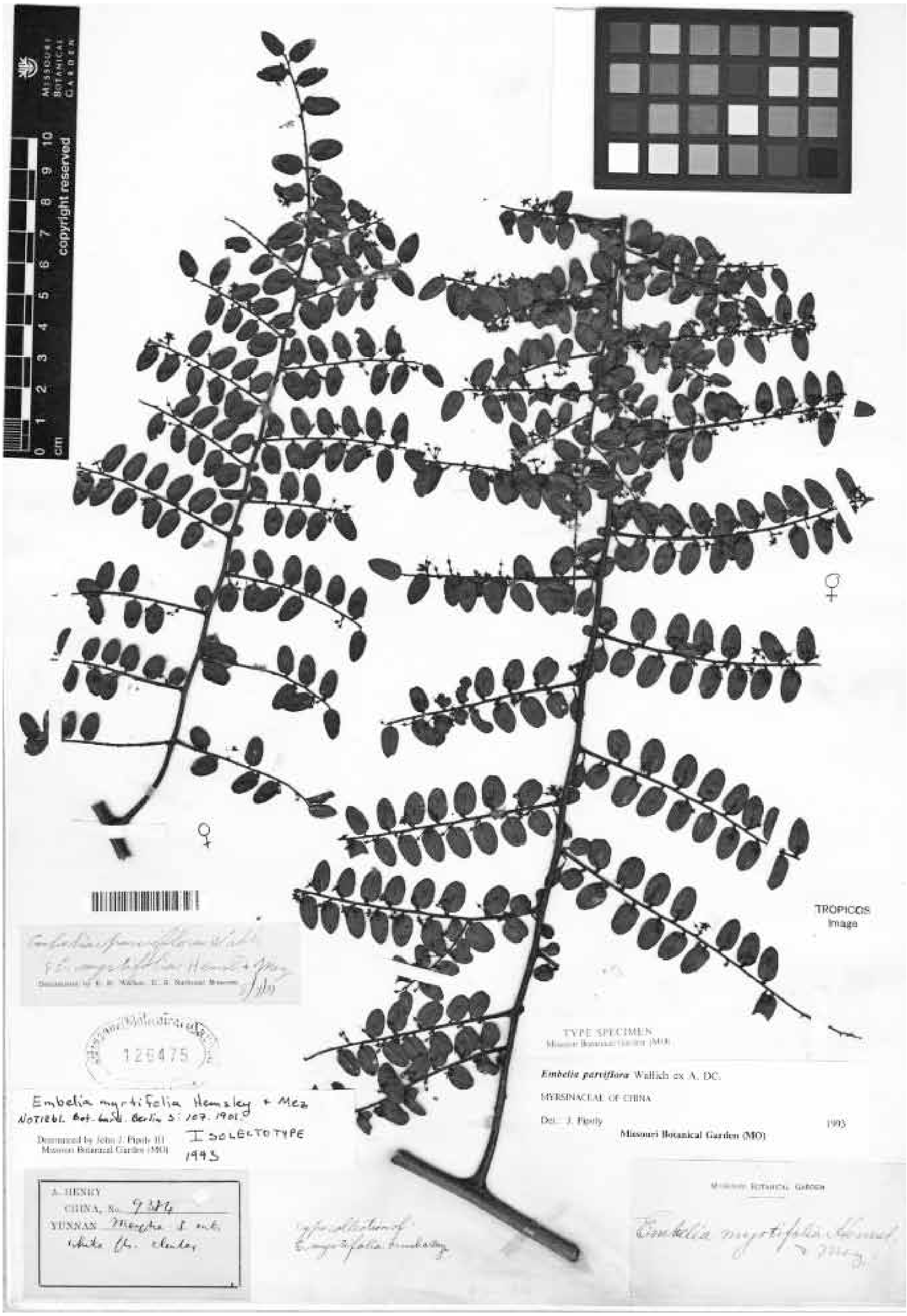
MISSOURI BOTANICAL GARDEN
cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
♀
♀
TROPICOS Image
126475
Embelia myrtifolia Hemsley + Mez
NOTIZBL. Bot. Gard. Berlin 3: 107. 1901.
Determined by John J. Pipoly III
Missouri Botanical Garden (MO)
ISOLECTOTYPE
1993
A. HENRY
CHINA, No. 9384
YUNNAN Mengtze
white fl.
TYPE SPECIMEN
Missouri Botanical Garden (MO)
Embelia parviflora Wallich ex A. DC.
MYRSINACEAE OF CHINA
Det.: J. Pipoly
1993
Missouri Botanical Garden (MO)
MISSOURI BOTANICAL GARDEN

Fig. 2.　Type of *Embelia parviflora* Wall. ex A. DC. (MO).

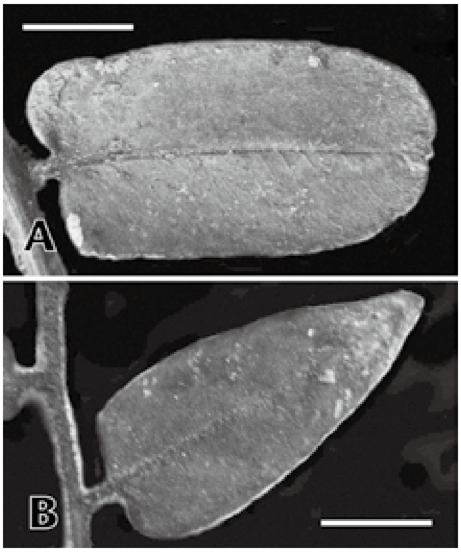

Fig. 3. Comparison in leaflet shape between *Embelia arunachalensis* (A) and *E. parviflora* (B). Scale indicates 5 mm.

Endemic to India.

Ecology: Grows on shady hillocks and shrubby areas is association with *Saccharum arundinaceum*, *Abroma augusta, Carex cruciata* and various ferns.

Note: The species can be easily identified by its comparatively large, uniformly ovate to oblong leaves and with a mucro on the apex (Figs. 3, 4). The apex is also densely punctate; while in *E. parviflora* (Fig. 2), it is sparsely punctate. The fruits are also bigger in size with a thicker mesocarp.

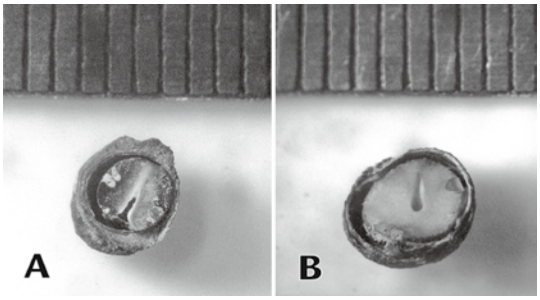

Fig. 4. Comparison in mesocarp between *Embelia parviflora* (A) and *E. arunachalensis* (B).

Authors are thankful to Dr. M. Sanjappa, Director, Botanical Survey of India, for facilities and encouragements. Thanks are also due to Dr. James C. Solomon, Curator, Missouri Botanical Garden, Missouri for kindly allowing us to publish the type image of *Embelia parviflora* from Tropicos website.

References

Chen J. and Pipoly J. J., III. 1996. *Embelia*. *In*: Wu Z.-Y. and Raven P. H. (eds.), Flora of China **15**: 29–38. Science Press, Beijing and Missouri Botanical Garden, St. Louis.

Giri G. S., Pramanik A. and Chowdhery H. J. 2008. Materials for the Flora of Arunachal Pradesh Vol. 2. Botanical Survey of India, Kolkata.

R. T. チョーダリ[a]，R. C. スリヴァスタヴァ[a]，A. K. ダス[b]:

インド，アルナチャルプラデシュ産 *Embelia* 属（ヤブコウジ科）の１新種

インド・アルナチャルプラデシュ州 Upper Siang 地方から *Embelia* 属（ヤブコウジ科）の１新種，*Embelia arunachalensis* R. K. Choudhary, R. C. Srivastava & A. K. Das を記載した．本種は近縁の *E. parviflora* Wall. ex A. DC. からは，小葉がより大型で，先端に微突点があることで区別される．また，果実も大型で，中果皮がより厚い点でも異なっている．

（[a] インド・植物調査所（イタナガール），
[b] インド・ラジヴ　ガンディー大学）